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You may not control all of a company's technology choices anymore, but you still have to manage risk and save users from themselves 32

BY STEPHANIE OVERBY

BUSINESS TECHNOLOGY LEADERSHIP

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September 15, 2011 \$9.00

Cognizant

THE FUTURE
IS NOW

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COVER STORY You may not control all of a company's technology choices anymore, but you still have to manage risk and save users from themselves

BY STEPHANIE OVERBY



Lisa Davis, CIO of the U.S. Marshals Service, set up a CIO Store on the agency intranet so end users can easily see if IT already owns the technology they want.



FROM THE
EDITOR IN CHIEF

start

Getting to Yes

Business users everywhere these days seem to be losing their collective minds and going rogue. Not in the inimitable style of a certain former governor of Alaska, but in the combative style of impatient teenagers who want what they want when they want it. (That would be *now*.)

Who needs IT when the corporate Amex will speed you right onto that new cloud service? Why wait in the IT project line if you don't have to? When you add together the trends of rampant IT consumerization, ubiquitous mobile devices, multiple cloud offerings and high-speed business needs, what do you get? One rogue user problem, supersized.

But other than shadow IT being a bigger headache than ever before, what else is new? Your response to it. More CIOs are taking a proactive stance on rogue IT rather than struggling against an unstoppable tide of change, writes Stephanie Overby in this month's instructive, idea-packed cover story ("Embrace Rogue IT," Page 32).

"We find every way to say 'yes,'" says CIO Lisa Davis of the U.S. Marshals Service, who arrived at the federal agency in 2008 to find a do-it-yourself-IT culture run wild. Like many smart CIOs are doing now, Davis found ways to strike up a more cooperative IT-business partnership. The partnership theme runs strongly through our story, with practical examples of how to make it more than just talk.

"Ask them what you can give them, how you can support them better," advises Andy Mulholland, global CTO of consultancy Capgemini. "Come in as a friend to help them, not an enemy to stop them."

What else can the yes-oriented CIO do? Some ideas from our story include:

- Encouraging your staff to take a more active teaching role, especially in cybersecurity risk. (Save us from ourselves.)
- Offering more transparency in the IT decision-making process. (Treat us like we know more than we do.)
- Creating internal customer guides to illustrate IT's vetting process for new technologies. (Help us shop smarter on our own.)

Getting to yes with those rogue users could be the best move your IT organization ever makes.

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
mfjohnson@cio.com

CHATTER

Hardly Any Hardware

Following the union of **Motorola and Google**, one has to wonder where Microsoft stands as the lone smartphone provider that **doesn't own any hardware**. Senior Online Editor Shane O'Neill talks to industry analysts to find out whether the company plans to put some **skin in the game**. Analyst Roger Kay says Microsoft should **stick with software** because adding hardware could **distract** from its main business. O'Neill thinks its **partnership with Nokia** will keep it afloat.
www.cio.com/article/688154

Stock Stress Tests

O'Neill also **wondered how Bloomberg** CIO Vipul Nagrah managed the sudden data explosion caused by a **volatile stock market**. Nagrah says data rates and volumes are the **highest they've ever seen**, but his team spent **months preparing** for such an event. That preparation included **stress testing** their systems to ensure they had enough bandwidth, with extra prep after **Standard and Poor's** downgraded the U.S. credit rating. So far, no clients have had any **major issues**. www.cio.com/article/687656

Consumerization Nation

Contributing Writer Bernard Golden says the **consumerization of IT** is more than just a trend of workers using consumer devices. Consumers will become the primary users of **internal IT applications** and organizations will feel increasing **pressure to embrace bring-your-own-technology** policies. Golden says that as a result of the consumerization wave, companies need to **reorganize the way they do business**.
www.cio.com/article/687931

Compiled by Editorial Assistant Lauren Brousell. Have a comment about a story in this issue? Go to www.cio.com/issue/20110915 or write to letters@cio.com.



Rebuilt. Renewed. \$71 million saved, too.

Hurricane Katrina forced Tulane University in New Orleans to close its doors and evacuate its students. The campus was under water, and if it did not re-open by the next semester, students might never return.

In less than six months, Johnson Controls helped rebuild the campus. This included providing emergency generators to restore power, and repairing and replacing the mechanical, electrical and plumbing systems in more than 40 buildings. When Tulane re-opened in January 2006, 87 percent of its students returned and thousands of local citizens went back to work.

With the campus restored, Tulane looked to renew and improve its facilities. Partnering with Johnson Controls, Tulane expanded and upgraded its central plant, and implemented energy management strategies across the campus. The result? Natural gas consumption has been reduced by 43 percent and carbon dioxide emissions decreased by 37 percent, annually. Better still, these upgrades are projected to save \$71 million over 12 years—guaranteed. At the same time, Tulane has an enhanced learning and working environment for students, faculty and staff.

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FROM THE
**PUBLISHER
EMERITUS**

Find What's Broken

Isn't it grand when things work? And isn't it frustrating when they don't? I recently lost my password for an application at work. I sent a "forgot password" message to the department that built the application and promptly received a temporary password. The password-reset page looked well designed but seemed out of touch with its users. Why? The first question it asked me was to put in my old password.

"Hello, I forgot my old password! That's why I'm on this page," I felt like screaming at my monitor, but then a coworker told me that my old password was really the temporary password the system gave me. Then everything worked and I set a new password.

Social media is another area that, for many companies, is not working as planned. Paul Gillin, a social media consultant, suggests one reason why: Sales, marketing and human resource departments are usually in charge. To make social media iterations work better, Gillin suggests you instead put the people who make the products you sell in charge of managing social media. He tells the story of how one Midwestern manufacturing firm put product engineers in charge of social media and saw improved results. Why? Because customers want to speak with employees at your firm who build your products, not those who market or sell them.

Customer affinity programs are another area that could stand a usability overhaul. Are your affinity plans fostering deeper engagements with customers, or are they driving your clients to your competitors? Airline affinity plans, for example, seem particularly misguided. I recently traveled on a merged airline where I boarded in the last group behind the endless affinity classes of the two merged carriers. Even though I have 500,000 miles with one of the carriers, I now make it my goal to avoid this airline when I plan my business trips.

IDG, the parent company of *CIO*'s publisher, made millions in the 1990s by capitalizing on something that doesn't work well: product manuals. The "For Dummies" series was built on the premise that product manuals are too complex. While IDG no longer publishes the series, its premise remains true: Product manuals are too complex; you shouldn't need an engineering degree to decipher them. A picture is worth a thousand words, and technologies like data visualization can make your manuals work better.

How are things working for you? Tweet your stories to twitter.com/gbeach.

Gary Beach, Publisher Emeritus
gbeach@cio.com



PRESIDENT AND CEO Michael Friedenberg
GROUP PUBLISHER Bob Melk
PUBLISHER EMERITUS Gary J. Beach
CHIEF CONTENT OFFICER John Gallant

EDITORIAL

EDITOR IN CHIEF
Maryfran Johnson

EXECUTIVE EDITOR
Elana Varon

SENIOR EDITOR
Kim S. Nash

ASSISTANT MANAGING EDITOR

Christine Celli

COPY EDITOR

Colleen Barry

CONTRIBUTORS

Kathleen Carr, Rick Gilbert, Joab Jackson,
Khalid Kark, Kristen Lamoreaux, Stephanie Overby,
Juan Carlos Pérez, Agam Shah, Bob Violino

EDITORIAL ASSISTANT

Lauren Brousell

CONTRIBUTING EDITORS

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DESIGN

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ONLINE EDITORIAL

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Brian Carlson

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Meridith Levinson, Shane O'Neill

SENIOR ONLINE WRITERS

Tom Kaneshige, Al Sacco

STAFF WRITER

Kristin Burnham

ASSOCIATE ONLINE EDITOR

Sheryl Hodge

RESEARCH

RESEARCH DIRECTOR

Carolyn Johnson



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VIEWPOINT



Kurt Roemer

CHIEF SECURITY STRATEGIST
FOR CITRIX SYSTEMS

Kurt Roemer is the chief security strategist for Citrix Systems, leading security, compliance, risk and privacy strategy efforts for Citrix products. As a member of the Citrix CTO Office, he sets the technical direction for cybersecurity innovation. Roemer is a Certified Information Systems Security Professional (CISSP) and a commissioner for the U.S. public-sector Cloud2 initiative and led efforts to develop the Payment Card Industry Virtualization Guidance Information Supplement.

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Data Security via Desktop Virtualization

By centralizing virtual desktops and data, companies can protect sensitive information while giving users more flexibility and choice.

What are the main security “pressure points” corporate and government organizations face today?

The top three are the consumerization of IT, cloud computing and a wildly evolved threat landscape. Consumers today are bringing their own devices into the workforce, selecting their own applications and making other decisions that IT departments used to make. Consumerization changes fundamental security assumptions and really shakes the foundation that IT security has been built upon. As for cloud computing, the fearmongers who state that the cloud is the end of security are wrong. The cloud can give us a needed restart to do security right—taking into account how people are using today’s computing technologies while protecting sensitive data and privacy. Finally, on the threat landscape, we’re seeing that current attempts at data exfiltration are highly successful. The old security model that protects primarily against malicious access attempts is woefully inadequate to mitigate vulnerabilities once access has been granted.

What is desktop virtualization, and how can it increase IT security?

With desktop virtualization, you can take a familiar desktop PC or laptop environment, virtualize all its applications and the desktop interface itself and run everything on server-based virtual machines in the data center or in the cloud. Users can then access their virtualized desktops with various client devices, including PCs, tablets and smartphones. Every user can be strongly authenticated into the virtualized desktop environment. All data that goes back and forth between the client devices and any virtualized desktops or applications is natively encrypted. Along with that, everything—including transactions and access—is completely logged.

One of the primary advantages of desktop virtualization is its ability to keep sensitive data in the data center. Data owners can ensure consistency, backup, disaster recovery, availability and the ability to make endpoint storage

of sensitive data irrelevant. This eliminates a common point of loss and the need for breach notification if somebody loses their device. Moreover, offline and local compute usage models are available that enable both seamless access to public data and strong protection of sensitive data.

How can the deployment of desktop virtualization simplify and enhance the job of security professionals?

With distributed computing, IT had no idea of what sensitive data was on somebody’s laptop, so it had to manage every laptop as if it had sensitive data. With virtualization in place, security measures and policies ensure that data access and distribution are appropriate to risk. Security managers can define policies that are very granular to make sure everything is encrypted and continually monitored. Data leakage protection (DLP) and other advanced security measures can be enabled for a particularly sensitive application simply through integration of DLP into the data center—without the need to install a data leakage client on everybody’s personal device. By centralizing the data, the desktops and the applications, IT can focus on watching the vault, as opposed to having to watch for all sensitive resources on all the computers that could potentially access it.

How can the deployment of desktop virtualization benefit employees and other consumers of corporate data and applications?

Desktop virtualization removes the need for all consumers to be their own IT manager and their own security officer. By automating data protection and freeing users from mundane and time-consuming data management responsibilities, desktop virtualization makes for greater productivity and happier users. It gives them more freedom of choice to use multiple devices and also enables “workshifting,” the ability to work anywhere, from any device and in any situation. Securely.

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Tablets Gain Ground

The iPad and other tablets are finding a foothold in the enterprise, and spending patterns are shifting accordingly **BY LAUREN BROUSELL**

According to our biannual tech priorities survey, spending on mobile and wireless continues to rise, with 54 percent of CIOs planning to increase budgets in that area, up ten percent from January. Tablets in particular seem to be gaining ground—55 percent of the 261 respondents plan spending increases there.

Ken Piddington, CIO of Global Partners, started supporting iPads in June and plans to add Android tablets next year, as well as adding a bring-your-own-technology (BYOT) stipend program. "It [takes] a lot of money and manpower to manage devices," he says. "As long as [employees] sign the [user] agreement, we can let them do their own thing."

CIOs are clearly focusing their investments on areas that further enable the mobile workforce, but only 36 percent allow employees to access corporate email on personal devices and fewer (23 percent) allow access to corporate applications. Many CIOs, like Piddington, feel BYOT's gaining ground, but just 6 percent provide an allowance for workers to buy their own devices.

Rick Okin, CIO of Epic Media Group, says that while some employees get iPads and Android tablets to use for developing mobile ads and for business intelligence (BI) reporting, people still bring their own devices to work.

"We allow people to bring in [their devices] and use them to get to the Internet, but they can't get to corporate systems," Okin says.

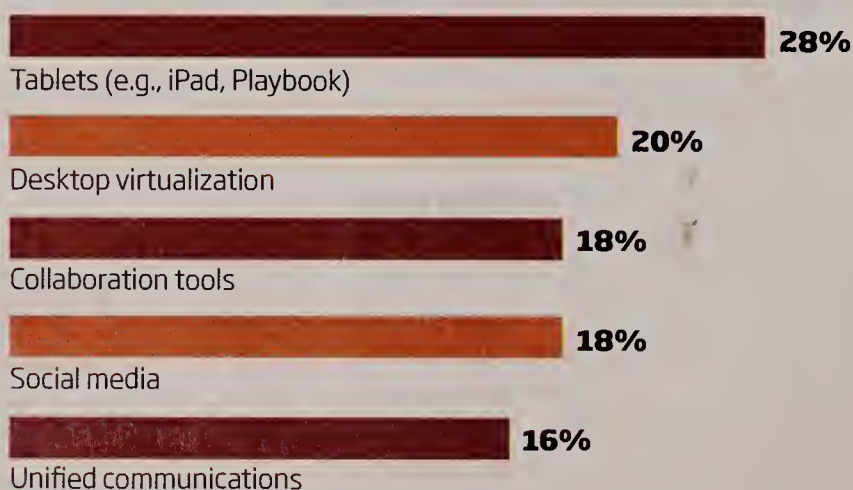
In general, deploying tablets is growing as an IT priority. Twenty-eight percent of respondents are now piloting the devices.

Steve Birgfeld, CIO of Hostess Brands, says his CEO was the first person to want to use an iPad on the company's network. "We had a strong test case," he says.

Birgfeld is testing some SAP and BI reporting capabilities on mobile devices, but he sees some security limitations. "The onus is on IT to work with mobile security and application providers to enhance this capability."

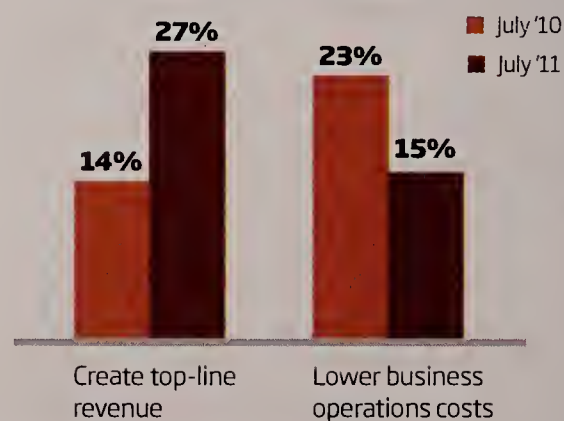
Contact Editorial Assistant Lauren Brousell at lbrousell@cio.com. Follow her on Twitter: twitter.com/lbrousell.

Top 5 Technologies You're Piloting



Shifting Priorities

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1	WebiMax Mount Laurel, New Jersey Kenneth C. Wisniewski 877-806-9142 www.webimax.com	2008	\$5 million - \$9,999,999	Above 100	250	98%	M	Barcelo, Braun, Hay Group, Harrah's Casino, Emagister, Sam's Club	100%	20	20	20	20	20
2	Customer Magnetism Virginia Beach, Virginia Aaron Leslie 800-610-7265 www.customermagnetism.com	2000	\$3 million - \$4,999,999	26 - 50	100+	92%	M	ECHO Inc., Sallie Mae, BeliefNet, FX Pro	99%	20	20	20	20	19
3	SEOP Santa Ana, California Rhonda Spears 877-231-1557 www.seop.com	2000	\$5 million - \$9,999,999	51 - 100	500+	96%	M	TVG, Siemens, Vibe	99%	19	20	19	20	20
4	Intrapromote LLC. Hudson, Ohio Sean Bolton 866-570-1785 www.intrapromote.com	1999	\$5 million - \$9,999,999	26 - 50	75	95%	M	Roto-Rooter, Fisher-Price, Honda, Cleveland Clinic	97%	20	19	18	20	20

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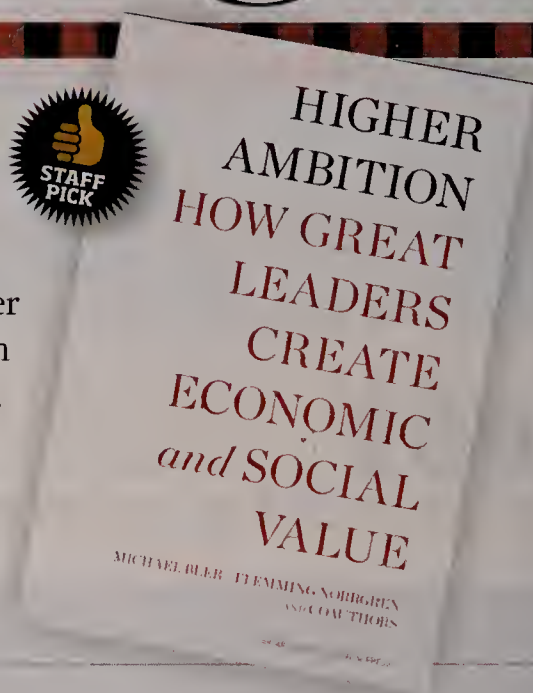
what we're Reading

Higher Ambition

How Great Leaders Create Economic and Social Value

By Michael Beer, Flemming Norrgren and co-authors

Want to make the world a better place? Start with your workplace. Beer and Norrgren say that by keeping one eye on the greater good, you can improve your company while producing benefits for society at large. This book synthesizes the experience of 36 CEOs, many of whom inherited failing companies, and explains how they ran their companies in socially responsible ways, became more approachable leaders, and still kept shareholders happy. *Harvard Business Review Press, \$29.95*



Credibility

How Leaders Gain and Lose It, Why People Demand It

By James M. Kouzes and Barry Z. Posner

BOOK Getting people—both above and below you on the organizational ladder—to listen to you takes credibility. The authors of *The Leadership Challenge* have expanded on that book by updating this one. Originally published in 1993, *Credibility* provides new insights and interviews from leaders who have built trust and used it to achieve great things. Kouzes and Posner don't just talk to leaders, though, but also their constituents. One hundred thousand people were asked what qualities they look for in those they follow, and Kouzes and Posner came up with some surprising tips. For example: Build hope by acknowledging reality but refusing to accept that bad predictions will inevitably come true. *Jossey-Bass, \$27.95*

@Enderle

By Rob Enderle

BLOG If you need a go-to source for news about consumer devices and technology research, follow analyst Rob Enderle. He tweets frequently, but nearly all his updates include informative links, so he won't clutter your Twitter stream. He has a sense of humor and is willing to engage other users, so if you respond to him, you'll probably get an answer. Sample tweet: "Is Web OS the Black Knight from *Monty Python and the Holy Grail*? Love that bit." twitter.com/Enderle

@TomCatalini

By Tom Catalini

BLOG Here's one recent tweet from the CIO of William Gallagher Associates, an insurance brokerage: "Babson student panhandling for a fall internship in [Post Office Square in Boston] this a.m. Like the hustle, but is that an economic indicator?" Catalini shares technology news, leadership advice, and writing and social media tips a few times a day.

twitter.com/tomcatalini

Streamlined Process Improvement

The Breakthrough Strategy to Reduce Costs, Improve Quality, Increase Customer Satisfaction, and Boost Profits

By H. James Harrington

BOOK If you feel like you've tried every business process management system out there and none of them worked as well as you'd hoped, Harrington thinks he has the answer for you. His theory is that existing methodologies focus too much on continuously making small improvements without necessarily making any dramatic ones. He lays out, in great detail, his Streamlined Process Improvement strategy to improve your processes in ways that produce real benefits.

McGraw-Hill, \$40

Compiled by Copy Editor Colleen Barry. To tell us what you're reading, write to letters@cio.com.

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NEWS Scan

Sprint Gets Its Turn with the iPhone

In mid-October, Sprint Nextel will begin offering the iPhone 5. The latest version of Apple's smartphone will hit the market later than expected; it was supposed to be out by September.

By adding the iPhone to its lineup, Sprint has a chance to compete more closely with Verizon and AT&T, although those carriers will also start selling the new iPhone around that time. Sprint's move could also fuel AT&T's fire in acquiring T-Mobile, which is currently ranked fourth among U.S. wireless carriers. *The Wall Street Journal*

HP Needed to Evolve, CEO Says

Hewlett-Packard CEO Leo Apotheker said the computer manufacturer is beginning a "needed transformation" to better compete for corporate technology budgets. The remark was part of his explanation of his recent moves, including the decision to spin off HP's personal-computer business, before investors in New York.

In an interview, Apotheker called the initial disclosure of the spin-off and HP's intent to acquire software maker Autonomy for \$10 billion "water under the bridge." The news triggered a 20 percent decline in HP's stock price.

The Wall Street Journal

Kundra Leaves CIO Role as Federal Cloud Push Faces Skepticism

Vivek Kundra has left his role as White House CIO to return to academia. Kundra will be replaced by Steven VanRoekel, a former Microsoft executive who joined the Obama administration in 2009 as managing director of the Federal Communications Commission. Kundra's vision for a leaner, cloud-based future for government remains in place, but it is being greeted with caution by some CIOs at federal agencies who have now been left to carry it out.

Recent attacks from abroad on government systems and contractors have heightened concerns over security in defense and intelligence systems. And surveys that ask federal agency CIOs about cloud computing find they are increasingly concerned about security. Nevertheless, the agencies must comply with Kundra's Cloud First policy, which encourages the use of cloud services for new projects and requires the agencies to move at least three existing projects to the cloud by next summer.

The New York Times

Big Shoes at Apple, but They May Not Be Unfillable

Proposition 1: Steven P. Jobs is a visionary who ranks among the greatest American inventors. Proposition 2: Apple will keep churning out the hits under Jobs's successor, Timothy D. Cook.

These two notions dominated the discussion of Apple the day after Jobs stepped down as its chief executive. Cook should have it relatively easy for the next couple years, most commentators agreed. The company will keep putting out products that are faster, thinner and lighter than those that came before. Cook has more than enough experience as COO to make that possible. But eventually, if Apple wants to retain or even improve its stock market valuation, its executives must channel Jobs and think up a new product.

The New York Times

Wikipedia Losing Contributors

Wikipedia, the online encyclopedia written by its contributors, has been lacking just that. At its annual conference, founder Jimmy Wales said the nonprofit company that runs the site is having trouble finding and keeping content editors and writers. Administrators are looking for ways to make it easier to contribute to and edit the site, a process now considered convoluted.

In early 2011, the site had 90,000 active contributors—primarily men in their mid 20s—but the founder notes that the typical contributor gradually moves on to bigger and better things.

Wikipedia plans to expand a program that encourages professors to have their students write Wikipedia entries as a class assignment.

The Boston Globe

Report: Android Least Open of Open-Source Mobile Platforms

A study from market research firm VisionMobile found that Android is the least open of the major open-source mobile platforms. The report evaluated eight of the largest open-source providers and ranked them in an open-governance index. Android was judged 23 percent open, a poor showing in comparison to first-place finisher Eclipse, which scored 84 percent. Part of the problem with Android's governance model is a lack of transparency in its compliance program, the report found.

Ars Technica

Storm in Dublin Causes Cloud Power Failure

A lightning strike in Dublin Sunday, August 7, caused a power outage that resulted in Amazon and Microsoft cloud services going offline. Lightning struck a transformer at around 1:40 p.m. Eastern time and knocked out backup generators. Amazon notified customers, saying many of its Elastic Block Storage (EBS) servers had lost power. The company had to resort to manual operations and scrambled to add more EBS capacity.

Services were restored to all customers by 8:45 p.m. Eastern. A Dutch company, Layar, one of Amazon's cloud customers, was affected by the outage and reported that while Amazon worked hard to restore services, the provider's updates didn't always match what Layar was seeing on its end.

IDG News Service

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Tailor-Made Mobile

Retailer Guess fits business intelligence applications to the right device **BY KIM S. NASH**

Mike Relich, CIO of Guess, wants to take the guesswork out of mobile computing. He welcomes mobile devices of all sorts for corporate use, charging his team to find ways around any processing power, presentation or security issues.

Any smart CIO would do the same, Relich says. Companies that don't jump at mobilizing enterprise data and applications are risking not only alienating smartphone-toting employees but also losing ground to competitors. "Look, there are—what?—6.9 billion people on earth and about 1 billion PCs, but 5.3 billion phones. We have to embrace these devices," Relich says.

The clothing maker and retailer has three categories of enterprise mobile applications: marketing and branding apps aimed at consumers; productivity tools for the operations staff; and applications that help managers make decisions faster. This last group, mobile business intelligence (BI), is where Guess has focused most, Relich says, "because that is what will make you money." Guess revenues were up 16 percent for fiscal 2011, to \$2.5 billion, while profits increased 13 percent. ▶▶▶

crunch

►►► **Mobile BI** Continued from Page 17

One BI application allows Guess buyers, who decide which jeans and accessories to stock in which stores, to analyze sales trends on their iPads using data, graphics, photos and GPS information about individual products, stores and regions. Buyers can drill into the data to see forecasts, goals and historical trends. The application accesses current data using database and BI software from MicroStrategy.

See Trends More Clearly

Guess is ahead of the curve, says David White, an analyst at Aberdeen Group. While many companies want to deploy mobile BI, just 38 percent of 240 companies Aberdeen surveyed are doing it. Small smartphone screens are an obstacle, but one that could be cleared by tablets, White says.

Having visual information helps Guess employees spot sales opportunities more quickly, Relich says. With the iPad, a buyer can click on a picture of a product superimposed on a map to see sales and other data for that region. Last autumn, returns of a thin jacket outweighed sales in the Northeast,

where temperatures were unseasonably cold. "Seeing the behavior data by geography, visually, made the issue obvious," says Relich. Guess quickly got thicker jackets to stores in the region.

Operations staff, such as field managers, use BlackBerrys. The display and processing limitations of the devices mean they can't support interactive features, says Bruce Yen, director of BI at Guess. They're better suited for a fast look at static data, such as customer traffic patterns.

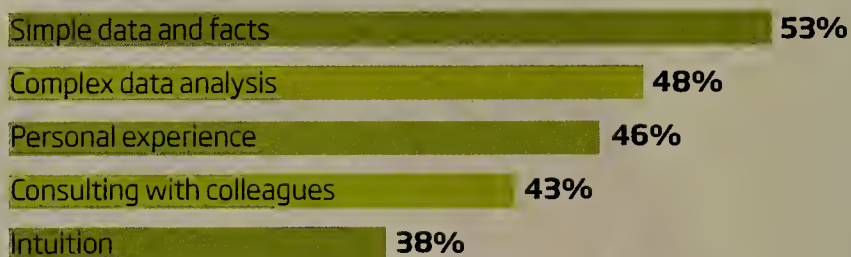
Guess keeps mobile devices secure with strong passwords that include capital letters, symbols and numbers. Logging in to an iPad many times a day, because an application times out after 5 minutes, is irritating, says Yen. A buyer may be looking at product data and then get pulled into a conversation with a store manager, so keeping the iPad active for up to an hour may make sense for some applications and some users. "You want to make it convenient, but you have to have enough security to satisfy internal requirements. It's not the easiest thing to balance."

Contact Senior Editor Kim S. Nash at knosh@cio.com. Follow her on Twitter: twitter.com/knosh99.

The Facts, Please

Business leaders think they can get more from analytics. Most rely on basic data to make sales and marketing decisions.

Percentage ranking each factor as important for decision making



SOURCE: ACCENTURE GLOBAL SURVEY OF 800 DIRECTORS AND SENIOR MANAGERS

Brain-Like Chips Tested

IBM has begun testing prototype chips that could mimic the way the human brain works. The chips are designed to enable computers to make decisions by collating and analyzing immense amounts of data, similar to the way humans understand events, says Dharmendra Modha, project leader for IBM Research.

Machines using such chips would be a sharp departure from current computers, which have processing limitations and require specific programming by humans to generate results.

"We now have the seeds of a new architecture that can allow us to mine the boundary between the physical and the digital world in an ever more efficient way," Modha says. For example, the chips could help manage water supplies through real-time data analysis and pattern recognition; or they could help grocers identify bad produce.

IBM developed the chips with researchers at Columbia University; Cornell University; the University of California, Merced; and the University of Wisconsin, Madison. The Defense Advanced Research Projects Agency, part of the Department of Defense, recently contributed \$21 million to the initiative.

—Agam Shah

....**43%** CNN online traffic coming from social channels. Outbrain**13%** People who, when asked to demonstrate, could properly scan a QR code with their phones. Lab 42**10%** Facebook members who use the site's apps. comScore

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Anthony Wang, CTO, Tobi

TOBI

Using Analytics to Make Social Media Profitable

BY STEPHANIE OVERBY

THE PROJECT :: Deploy a social commerce tool that can help online fashion retailer Tobi forecast the results of social media promotions and boost revenue.

THE BUSINESS CASE :: Tobi's founders needed to integrate social media into the company's marketing and sales strategies. But its in-house efforts—posting promotion codes on its Facebook fan page, for example—were a flop, says CTO Anthony Wang. Redemption rates were low, and when a promotion did engage followers, there was no way to determine why it worked.

Wang researched whether Tobi could develop more robust social media analysis tools that would give it insight into the specific actions of its fans and customers, but he determined it would require too much time, money and attention. "It's hard for a retailer to build a social commerce platform on its own," Wang says.

Instead, Tobi subscribed to CalmSea's predictive social commerce offering, which Wang says costs several thousand dollars a month but requires little upfront investment. The software collects traditional online marketing data, such as click-throughs, along with data published on the social media pages of people who access the promotions.

FIRST STEPS :: In the first phase of the project, the marketing department launched contests, giveaways and sales on Facebook and Twitter using the CalmSea tool. During each promotion, the software collected data about potential customers' likes, interests, posts and comments, creating a "social graph" that mapped potential buyers' relationships. "It gives us some great insights, beyond just their purchase history," Wang explains, noting that the tool shows what customers' friends like and how influential they are.

In the second phase, Tobi integrated CalmSea with its transaction logs and Google Analytics tools. When a customer used a code from a social media promotion, the system pulled together that person's social graph and purchase history. "Based on the combined data, we can gather insights about our customers and offer personalized promotions," Wang says. Within three months, Tobi saw a five-fold growth in social-media-generated revenue. "People are referring before they buy, and social [media] really accelerates how fast those referrals can spread," says Wang.

Next, Tobi will use CalmSea to manage and measure promotions on its website and Facebook to target customers based on their online behavior and create a cross-channel marketing strategy.

WHAT TO WATCH OUT FOR :: Social media promotions must be fun, Wang discovered. Merely offering discounts won't promote the brand or boost sales; you have to create games that make shopping more enjoyable. Tobi has deployed shareable giveaways, through which fans receive additional entries every time they share a promotion with friends, and it offers exclusive private sales for its most loyal fans.

"We spent a lot of time thinking about how to correlate promotions with downstream actions, from impressions on Facebook or Twitter to referrals to site visits to purchases and revenue," Wang says.

Although it's safest—and quickest—to start small, Wang wishes he had integrated CalmSea with back-end systems from the start. "It wasn't until we were running that we saw the value of the second phase," he says.

Stephanie Overby is a freelance writer based in Massachusetts.

.....17% Consumers who are likely to buy the new BlackBerry Bold. Changewave\$1.1B Value of music service Spotify after U.S. launch. Spotify34% U.S. cellphone users who have shot video with their phones. Pew Research Center

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Translate This

To make enterprise architecture relevant, create a common IT-business language **BY BOB VIOLINO**

How a CIO talks to other business leaders about planning and implementing enterprise architecture (EA) makes a huge difference to the success of the effort. But all too often, the discussion becomes a soup of technical jargon and business buzzwords. A simple, coherent message is key.

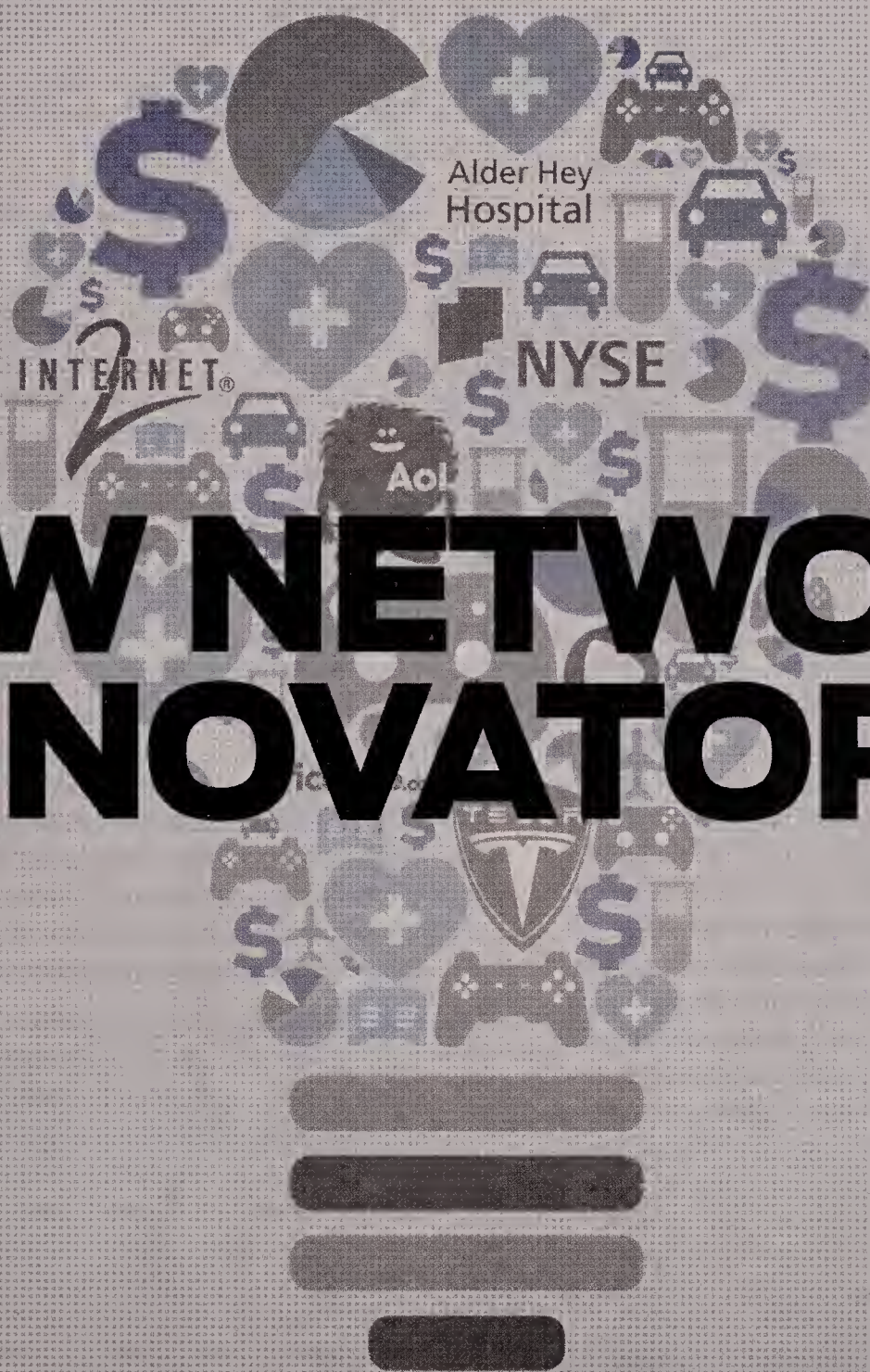
Joe Drouin, senior vice president and CIO at workforce services company Kelly Services, has found it's easy to lose your audience when you're talking EA. "EA-speak gets very academic when you talk frameworks and domains and models and methods. It gets complicated really fast."

Rather than getting into theoretical discussions and referencing complex wall charts, Drouin keeps the conversation focused on business priorities, collaboration and how IT components can deliver value to the organization through EA.

"We spend a lot of time working with people in the business to help them understand the ▶▶



Jean-Michel Ares, group head of technology for BMO Financial Group, has found that creating a simple set of accepted terms is helpful in EA discussions.



NEW NETWORK INNOVATORS



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►► **Architecture** Continued from Page 22

why of [EA] without really talking about architecture," Drouin says. "That's really worked."

In simple terms, EA is about aligning the strategic vision of the business with its IT infrastructure and applications, and enabling business units to create a more seamless experience for customers and technology end users.

Your conversations with business leaders should be focused on two areas: how the architecture will be used as a competitive asset and how it will deliver strategic advantage, says Neal Kaderabek, divisional vice president of financial services and CIO at Hallmark Services, a provider of administrative services for the individual health insurance market.

"Using real examples of problems business leaders encounter on a daily basis is an excellent approach to introducing EA as a solution and not another flavor of the day," Kaderabek says.

The business leaders Kaderabek works with aim to reduce costs without compromising scalability, speed to market and quality. "Conversations on architecture are channeled to ensure these outcomes will be realized," he says. "Demonstrating the [positives] as they occur goes a long way toward reinforcing their support for the architecture."

At BMO Financial Group, a financial-services firm, the EA practice works on four areas: architecture-development processes; an effective governance model; organizational competence; and shaping the culture, says Jean-Michel Ares, group head of technology and operations. Ares has found that creating a set of accepted terms for describing things is key to successful EA communication. BMO developed a framework that breaks the organization into logical building blocks, such as products and real estate.

"This simple description creates a common language for technology and the business to discuss issues relating to day-to-day operations and strategy to improve capabilities," Ares says. "The framework is used consistently across all business units to develop our investment plans," he says.

Jeff Scott, principal analyst at Forrester Research, also suggests you ensure enterprise architects and IT are on the same page before you approach business leaders about EA. "There is nothing worse than the CIO pitching one view and the architects showing up with another," Scott says. "And I see this much more often than you would imagine."

Bob Violino is a freelance writer based in New York.

Trading Microsoft for Google Apps

BY KRISTIN BURNHAM

When Michael O'Brien joined Journal Communications as its new CIO, he had a stacked agenda. The media company had operations in publishing and radio and television broadcasting, but the industry was changing and O'Brien was tapped to spearhead the transformation. On his list: Harmonize and consolidate disparate IT shops, break down silos, and question every process.

What They Did: "When I got here, we had one IT organization focused on TV, one on radio and one on publishing," he says. "We needed to consolidate, so we started with people, then processes, and worked our way to systems." That's when the contract with Microsoft was scrutinized. "We looked at what it was going to take to upgrade the productivity tools, email and collaboration systems, and it was substantial," O'Brien says. "There was going to be a lot of hardware and software to repurpose and replace."

Journal Communications is now engaged in a three-phase rollout of 2,700 Google Apps seats. So far the deployment has been successful, though some employees feel uncertain. "There are some people who have only used Microsoft, so naturally they're a little nervous," O'Brien says.

How They Did It: O'Brien first tested the Google Apps suite with users in IT. The main objective: Determine how they could use the tools and how they would fit within the company. During this 60-day tryout, O'Brien says, they migrated people at various levels—some only had the browser, others had just the Google tool set and still others had the entire suite. "We had to make sure the tools worked within our business, and we had to emulate how the business would use it," O'Brien says. "We had weekly meetings about what was going well and not going well."

At the end of the trial period, O'Brien says, they were convinced Google Apps was the right choice. The next obstacle: convincing the legal team that the cloud was secure.

O'Brien says IT workers who were also business savvy helped break down the basics of cloud computing. These people also spent a lot of time creating slides to translate tech-speak. The key, O'Brien says, was to weed out IT jargon.

And sometimes help came from unexpected events. "Within two weeks of signing the Google contract, we had a catastrophic loss in our [Microsoft] email servers," O'Brien recalls. "We had people who lost all their contacts. I had people raising their hands asking to be the first to go Google."

Kristin Burnham is a staff writer for CIO.com. Follow her on Twitter: twitter.com/kmburnham.



Millennials in the House

Millennial workers see the world differently. Having grown up with technology, millennials are not only most comfortable with the tools of the Digital Age, they find new ways to apply them to push innovation, creativity, and results. Millennials embrace collaboration, dislike rigid corporate structures, and aren't afraid to ask questions.

In the workplace, these traits translate to greater employee productivity and job satisfaction, more innovation, and tighter connections with younger customer segments.

"Millennials are part of the innovation equation, they see and attack a problem so differently than employees from other generations," says Tim Young, director of technology with Resource Systems Group Inc., with a staff made up of roughly 60 percent millennials.

However, few companies are implementing programs to attract this growing segment of the workforce. In fact, according to a study by IDG Research Services in conjunction with Cognizant:

- More than half of respondents say their companies aren't making special efforts to attract millennials.
- The majority reveal that they don't necessarily know what a millennial employee expects from an employer.
- Only 3 percent say they have optimized business processes to manage millennial requirements.

And that's despite the fact that adding millennials to the workforce can give enterprises competitive advantages—such as 10 to 20 percent greater productivity, according to Gabriel Schild, director of business consulting with Cognizant.

Beyond Hiring

Considering the benefits that millennials can bring to an organization, and the fact that the baby boomer generation is approaching retirement age and is already being replaced by young workers, enterprises should consider implementing programs such as internships and on-the-job training to attract millennial workers.

However, attracting millennials requires more than the right internship or training opportunity; it often means making changes to corporate norms in order to accommodate the expectations that younger workers bring with them. That might start with reconfiguring office layouts to encourage communication and sharing. But enterprises hoping to keep millenni-

ANGLE OF ATTACK

"Millennials are part of the innovation equation, they see and attack a problem so differently than employees from other generations."

als happy need to do more, like implementing work-at-home or flex-hour options, allowing employees to use company-approved smart devices at work, and deploying social networking tools and collaboration software to accommodate ingrained work behaviors and enable productivity. They also need to rethink their corporate structure to emphasize teamwork and equality while de-emphasizing hierarchy, and consider establishing corporate social responsibility programs.

Bringing in younger workers doesn't need to be an all-or-nothing proposition. While few companies would be willing to completely overhaul their culture to attract millennials, sometimes making small or incremental changes—allowing employees to occasionally work from home or work flex hours—can make a big difference.

And once the millennial mindset is put to work in an organization, problem-solving is approached in a whole new way.

"You could say that someone who's fresh and new—either part of a new generation or new to the company—will have more out-of-the-box thinking capacity," says Schild. "But because millennials grew up with the Internet, they are probably quicker in finding a solution to a problem in an unexpected way than previous generations." And that kind of innovative thinking is exactly what's needed going forward.

Download a white paper on this topic at www.cio.com/whitepapers/cognizant_millennials



ANALYST VIEW

Make Decisions Together

To succeed in the 'empowered era,' CIOs need to make sure their technology-delivery model has the right mix of IT and business control **BY KHALID KARK**

Employees no longer rely on IT to provision and deliver technology. Data center functions are outsourced; workers increasingly use social media, mobile tools, the cloud, and video to bypass IT. Many CIOs are concerned they they're losing control of their domain. Welcome to the "empowered era."

While many pundits are writing the CIO's obituary, Forrester believes these changes offer CIOs an opportunity to become more influential by supporting and facilitating business needs. In the empowered era, CIOs are not merely technologists who success is measured by uptime and availability. But to succeed, they need to do the following:

1. Invest in business outcomes, not just business requirements. Business outcomes should drive IT funding. Instead of blindly following orders to deliver technology, IT needs to act as a business partner to optimize the broader technology portfolio. CIOs should measure IT's success by tracking its impact on outcomes such as revenue, growth and customer engagement.

2. Focus on empowerment and innovation, not just execution. Successful CIOs create opportunities for the organization to innovate and are willing to take risks with disruptive technologies. By encouraging innovation and providing technology platforms that contribute to product development, IT leaders help drive growth.

3. Be a services orchestrator, not just a technology supplier. CIOs need to radically change the IT delivery model. As siloed IT functions merge in a new shared services model similar to other corporate functions, technology will be consumed as a business service. The CIO will be responsible for delivering the service, irrespective of where that service is being sourced.

If IT asserts too much control, empowered employees will bypass the IT organization. But if you let the business drive all technology decisions, there will be integration, ownership and scalability issues. (For more on this topic, read "Embrace Rogue IT," Page 32.)

Khalid Kark is a vice president and research director at Forrester Research, where he serves CIOs.

Fix Your Own Technology

When it comes to enterprise tech support, young employees seem to be more willing than their older peers to fix a problem themselves, according to a survey of 400 U.S. office workers in their twenties. The survey, commissioned by remote support appliance vendor Bomgar, also asked 200 IT managers for their perceptions of dealing with workers in this age group.

Younger workers, often referred to as millennials, may be more willing to try to fix a problem, or a lend a hand in the repair, in contrast to

older workers, who may feel more at ease letting help desk personnel or a system administrator solve their problem, the survey found. But when a technology stops working correctly, young workers expect it to be fixed quickly.

About 60 percent of respondents agreed that it should take a help desk 10 minutes or less to solve a problem. And 71 percent admitted they search for an answer to their problem on the Internet before they contact support staff.

Such self-sufficiency may be good news for overworked IT help desks, though it may also bring its own set of headaches, notes David Card, research director at GigaOm Pro, which analyzed the data. Help desk

services could, for example, implement such aids as self-help tools and easily searchable FAQs.

On the downside, Card warns, "if you Google a problem, you might come up with a bad solution and make the problem even worse." Or workers might end up exposing information about a company's IT practices, or damage its brand.

The survey did not directly compare young workers' technology preferences against those of older workers, though it did find that more than 80 percent of IT managers felt that millennials had "different" or "very different" expectations about technology compared to their more senior peers.

—Joob Jackson

CIOs Driving Enterprise TRANSFORMATION

Think smart about security



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CIO

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CIOs driving transformation

CLOUD AND EMAIL. HP's Chief Technologist Christian Verstraete hears this a lot from CIOs: "Is it safe to put my email in the cloud?" The answer, as he writes, is not a technology-oriented one at all. Rather, what matters is who owns the emails, and what could happen to them. <http://bit.ly/CIOSept1>

SECURITY CHECK. The main barriers to broader acceptance of Infrastructure as a Service (IaaS) center around security. As it turns out, the same security concerns apply to the virtualized server space, yet security got far less attention there. In this insightful analyst brief, John Burke, Nemertes Principal Research Analyst, runs down the list of real threats that CIOs need to consider when mulling broader moves into IaaS. <http://bit.ly/CIOSept2>

Visit our site at www.enterprisecioforum.com

SPOT LIGHT

Protecting the Instant-On Enterprise

This is the era of the Instant-On Enterprise, where everything and everyone is connected, where we respond to continuous opportunity and competition, and where we expect immediate gratification and instant results. But as evolving business models, technology advancements and the changing workforce provide opportunities for growth, increasing levels of threats continue to drive implicit and highly damaging business risk.

Security in the Instant-On Enterprise is no longer just about the end points and perimeters, no longer just about securing each level of the stack. With the influx of mobility and cloud, threats have become more sophisticated, persistent, and unpredictable. The Instant-On Enterprise needs to focus its attention on a more sustainable approach to risk management.

This means being able to clearly identify what matters most in terms of business value, then applying security investments commensurate with risk values and tolerance. Core business processes that enable competitive differentiation and keep the Instant-On Enterprise compliant rise to the top of the list. When you understand and rank the risk associated at the business process, service, or governance level you can align and prioritize—thereby reducing total risk exposure.

Enabling transparency into the risk/investment ratio associated with each level, and applying the appropriate remediation through people, process and technology puts the enterprise in a position to reduce operational risk, financial risk, and governance risk.

To learn more visit HP at www.hp.com/go/instant-on HP Enterprise Security is in the Solutions section.

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Friends in High Places

When searching for top-notch talent for a high-level hire, C-suite execs know to ask their personal networks first **BY KRISTEN LAMOREAUX**

Want top-notch hiring advice? Sometimes the best source is at the top of your organization. I spoke with several C-level executives, and every one said their peer network is their first stop when seeking top talent. And overwhelmingly, those networks are tapped the old-fashioned way—not via LinkedIn.

“My preferred route is network first, because of speed, cost and confidence in the decision,” says Mark Turner, CEO of WSFS Bank, one of the oldest continuously operating financial institutions in the nation. “I personally don’t use social media, primarily because traditional networking is so much stronger, and the costs of social media in terms of increased time burden have outweighed any benefits.”

But when it comes to hiring very high-level executives, Turner leaves no stone unturned. To make sure he’s getting a diverse talent pool and seeing the best candidates, Turner will consider running a tandem search with help from an executive search firm. “Network referrals tend to reflect the demographics of what you already have,” he says.

For Robert Zecca, cultural fit is critical. The former president and CEO of Content Data Solutions, a software systems integration company, and current interim president of Cable Technologies, a distributor of cable equipment for the telecommunications industry, says that to find a good cultural match, hiring through his network—and the networks of everyone he works with—yields the best results.

“I have three criteria which I use in hiring: they must be able to perform the job, their goals must align with the company’s goals, and they must fit into our culture,” he says. “By utilizing our networks, we find that the latter two requirements align and my job becomes a little easier.”

“We would simultaneously work with our HR director while I—and truly, all the employees—would reach out to our networks,” Zecca says. “Never underestimate the power of other people’s networks, or your own.”

While he’s a fan of social media, Zecca says only about 50 percent of his network is on LinkedIn and, he stresses, “There is no substitute for face time.”

Zecca does sometimes enlist the help of executive search firms, “if after, say, two months, our leads run dry.” The ultimate goal, he says, is using “whatever resource will ultimately give us the best employee.”

CIOs looking for key candidates appear to be spending more time on LinkedIn than their C-level counterparts. “When identifying candidates for key hires, I definitely start with my own professional network first and foremost,” says Greg Saltzman, CIO at InVentiv Health, a global provider of clinical, commercial and consulting services to healthcare companies. “The majority of my professional network is on LinkedIn, and with my premium account I can extend my connectivity within the LinkedIn network.”

“We are on a very fast-moving growth trajectory right now. Speed is of the essence in filling key leadership positions with individuals who are at the top of their game.

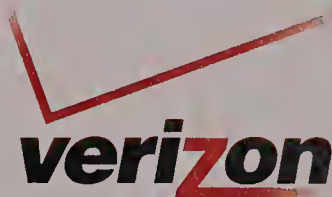
When I hire someone I know and trust professionally, I have a solid understanding of their capabilities coming in and can tailor the position based on their individual strengths, which is critical at the current stage of InVentiv’s corporate development,” Saltzman says.

You can’t be passive and expect to fill a key IT role within your organization. C-level executives are taking a scattershot sourcing approach, so mirror that and vary the channels you explore. Don’t rest on your 500-plus-online-connections laurels.

Whether you’re looking to hire talent or find your next CIO gig, get out, shake hands and deliberately engage your peer network.

Kristen Lamoreaux is president and CEO of Lamoreaux Search, which focuses on sourcing IT professionals for hiring managers. She also founded SIM Women, a networking association for female CIOs and their direct reports.

Don’t rest on your 500-plus-connections laurels. Get out and engage your peer network.



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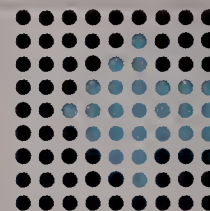
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Head in the Cloud

As Microsoft executes its Office 365 strategy, CIOs must decide whether to go to along

BY JUAN CARLOS PÉREZ

THE PITCH

With Office 365, Microsoft has made a major upgrade to its cloud-based communication and collaboration suite, offering a Google Apps alternative that is stronger than its predecessor, the Business Productivity Online Suite (BPOS).

"Office 365 is the future of business productivity for Microsoft," says Kelly Waldher, director of Office 365 product management for the company. Among the improvements: Office 365 applications, including Exchange and SharePoint, are now based on the 2010 edition of their on-premise versions.

Office 365 also comes with Lync Online, an upgrade to BPOS's Office Communications Online that offers IM, presence, Web conferencing and voice communications. Office Web Apps, the online version of Microsoft's ubiquitous productivity suite, is included, along with the option to subscribe to get the full-featured application.

THE CATCH

In the months leading up to the Office 365 launch in June, BPOS suffered several significant outages. If they become a recurrent problem for Office 365, sales could suffer, analysts say. Most cloud providers have experienced outages, but Microsoft has created higher expectations for its hosted software by saying it has more experience and a better understanding of business needs than its rivals.

Unlike cloud-only suites such as Google Apps, Office 365 is designed for hybrid environments. To use it both in the cloud and on the desktop, CIOs would need to deploy compatible versions of Microsoft's desktop and server products.

Forrester Research analyst Rob Koplowitz notes, meanwhile, that it's hard to integrate on-premise third-

party tools with cloud suites. Therefore, CIOs must weigh the benefits of cloud suites against the difficulty of integrating them with software from other vendors.

THE SCORE

"There is no doubt that Office 365 is going head-to-head against Google Apps," Gartner analyst Matt Cain said via email. "It is a savage competition that will pay benefits for the industry," such as faster innovation and lower prices.

Small companies may opt for a cloud-only Office 365 implementation, but midsize and large businesses are likely to pursue hybrid deployments for now, analysts say. That's partly because on-premise software provides functionality not yet available in cloud-based versions.

THE COMPANY

Microsoft

Headquarters: Redmond, Wash.

Employees: 90,400

2011 Revenue: \$70 billion

CEO: Steve Ballmer

What They Do: Microsoft makes a variety of applications and operating systems for consumers and businesses, including Windows, Office, Exchange, Dynamics, SQL Server and SharePoint. The company is now rolling out cloud-based versions of its traditional, on-premise applications.

Cornerstone Mortgage Company is pursuing this hybrid approach. Rather than upgrade its on-premise Exchange server, Cornerstone is deploying Office 365 to about 900 employees throughout the United States. The company is using SharePoint Online and the suite's video-conferencing, IM and Web meeting capabilities, while maintaining custom applications in-house.

CIO Christopher Meyers expects to save 40 percent on infrastructure costs for communication and collaboration over five years. But he's not rushing to move more on-premise software to the cloud.

Meyers would like Microsoft to draft a strategy for financial companies using Office 365, to ensure that the product always complies with government regulations. "We'd like to make sure we get something that works for us long term," Meyers says.

Juan Carlos Pérez is a senior editor with IDG News Service.



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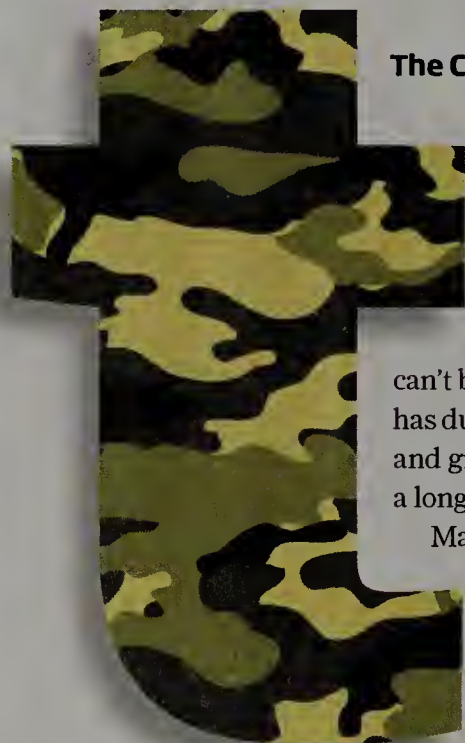
SONICWALL

Embrace Rogue IT

32

You may not control all of a company's technology choices anymore, but you still have to manage risk and save users from themselves

BY STEPHANIE OVERBY



The CEO has fallen head over heels for his iPad. The marketing team has set up shop on every social media site known to man. The sales group has secretly purchased its own software-as-a-service subscriptions. Meanwhile, the VP of operations is wondering whether there isn't something better out in the cloud that the company could use to run its supply chain.

The whole world, it seems, is going rogue.

And why not? With the consumerization of IT, the rise of the cloud, and unrelenting business demands for technology, who isn't wondering if they can't bypass IT for technology that's better, faster or cheaper? Forrester Research has dubbed this the empowered era of corporate IT. "Business is playing a greater and greater role in IT decisions," says Forrester vice president Matt Brown. "It's a long-term trend."

Mark Schwartz, CIO for the U.S. Citizenship and Immigration Services (USCIS) department, understands what's behind the shift. When employees see a way to improve a process or require technology to enable a new business need, they want to take action right away, Schwartz says. "The IT organization—with its constrained resources, backlog of projects, governance processes and controls, and focus on security and maintainability—can't always help or respond quickly enough."

Experienced IT leaders will recognize the beginning of a story that usually has an unhappy ending. Remember when low-cost servers were introduced? Business units, frustrated by flatfooted IT organizations, bought their own. And once they realized how costly and difficult it was to manage their impromptu server farms, they promptly plopped them back in IT's lap. The PC revolution? Same story, different decade.

But this time, forward-thinking CIOs are being proactive, in the hope that they can alter the ending of this oft-told tale. The challenge now is figuring out how to get to yes. CIOs

PHOTO BY STEPHEN VOSS

Lisa Davis, CIO of the U.S. Marshals Service, surveyed users to find out which technologies they envisioned using. The results quickly led to an iPad pilot program.



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IT standards "are guidelines, not a brick wall," says **Jay Burgess**, CIO of Muskogee Nation Casinos. "If the business is really trying to grow and really has a need, we need to adjust to meet that."

"IT needs to either figure out how to bring shadow IT into the light or risk being marginalized."

-Susan Cramm, Founder, Valuedance

are thinking about how to make better and faster technology choices, educating business colleagues about the enterprise risks posed by those choices, and developing guidelines—or conversation starters—to help business leaders make some of their own IT decisions.

In the future, corporate technology decision-making won't be paternalistic; it will be partnership-based. IT will not control all of a company's technology choices. But CIOs must retain control over their companies' technology narratives. Whenever possible, IT shops will figure out how to meet business needs faster and more flexibly. But when they can't, IT leaders must ensure that shadow IT shops act as true shadows—making the kinds of choices and trade-offs that IT would have made for them.

It's a difficult transition for the traditional IT organization, but it's not optional. "If you don't support some piece of technology, a user will go out and do it on their own," says Andy Mulholland, global CTO of consultancy Capgemini. "We've crossed the Rubicon. The thought, 'If I deny it, I will drive it out of sight,' is nonsense."

The New IT Mantra: Yes, We Can

When Lisa Davis joined the U.S. Marshals Service as CIO three years ago, the federal law enforcement agency was thick with do-it-yourself IT. "Customers had lost confidence in IT and went ahead and found solutions to meet their needs," Davis says. In addition to consolidating and stabilizing the technology environment, Davis also had to tame the insurgency. Her campaign to do so was grounded in one simple word: yes.

Business users weren't adopting their own IT because they wanted to. "The answer from IT had always been 'no,'" says Davis. For example, when marshals wanted to connect with state and local

police using the agency's network, IT refused the requests. So each field office set up ad hoc connections—at great cost to the agency. Today, it's a different story. "We find every way to say 'yes'" while considering cost, security and the requirements of federal law, says Davis.

One way is to take the initiative. Davis surveyed users to learn about the IT capabilities they imagined having in the next several years. The prevailing vision was one of mobility. Davis quickly set up an iPad pilot program. "They all want the newer and slicker technology, and one way to scratch that itch is to have proof-of-concepts to test them out," she says.

Together with 60 business users, IT developed several operational-use scenarios, such as language translation at the U.S.-Mexico border and operation planning for fugitive apprehension.

Now IT is developing the business case to justify a larger purchase of iPads, which would replace laptops or desktops for some users. The effort will satisfy that business yen for the latest and greatest, provide a more appropriate tool for some processes, and cut capital equipment-replacement costs.

At National Geographic Global Media, employees' unhappiness with workplace technology was apparent in the results of CEO John Fahey Jr.'s employee satisfaction survey. The business environment was changing rapidly, expanding from magazine, book and map publishing to include film and television production and distribution, Web properties, interactive tablet publishing, and gaming. Yet IT wasn't keeping up with the need for new productivity tools.

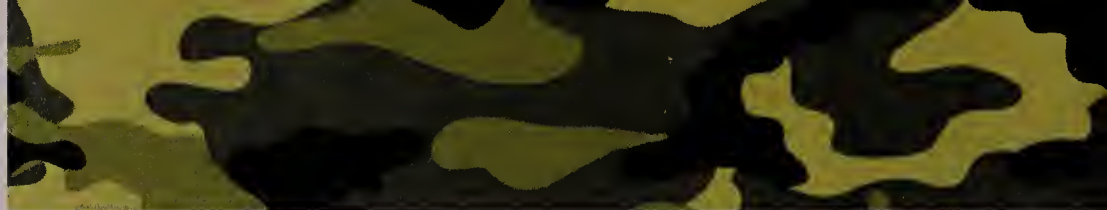
The employee satisfaction survey in 2009 found discontent with the antiquated email system, the mobile device options, and the old computers. Corporate leaders created an IT council to tackle the com-

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plaints. Last year, Senior Vice President and CTO Stavros Hilaris put email in the cloud, began offering users a choice of smartphones and tablets, and revamped the hardware refresh rate. The key, says Hilaris, "is to work in partnership with your business colleagues, understand and address their challenges and pain points, and understand the industries you're a part of in order to anticipate and plan for changes that are on the horizon."

The larger the organization is, however, the harder it is to keep tabs on what the business wants. Capgemini's Mulholland has a trick for figuring it out: Ask the CFO for data on technology spending by individual business units. "[IT leaders] always come back slightly shocked because it's going on more than they thought," Mulholland says. But they also come away with a list of people to focus on. "Ask them what you can give them, how you can support them better," advises Mulholland. "Come in as a friend to help them, not an enemy to stop them."

Of course, saying "yes" isn't always easy—or right. That puts Schwartz's team in an uncomfortable position. They feel, he says, "a strong sense of responsibility" for maintaining security, complying with regulations and spending money wisely. "Saying 'yes' can easily feel risky," Schwartz adds, so he's found a middle ground. Now IT says, "We can if...." The idea is to ultimately say yes by first finding the conditions—whether they're adding user support resources or hiring experts in a new technology—under which that "yes" becomes possible. "Tell me what would need to change in order to be able to solve the business problem," Schwartz says.

Help End Users Help Themselves

Getting to yes is just a start. The demand for new technology and the speed at which business needs are changing mean that many IT organizations are no longer capable of managing it all on their own. "Where this leads us to is a place where the IT department is going to have to stop doing what it's been doing for many, many years, which is, 'Here's our standard. Take it or leave it,'" says Ken Dulaney, vice president and distinguished analyst for Gartner. "IT is going to have to let the end user decide where they want to be in terms of service levels and risk."

The first step is to bring the basis for IT decisions into the open.

Davis created a customer guide to IT's solution-request pro-

Taming the Rogue Element

Better communication about what IT has to offer can head off rogue purchases

Sure, some rogue IT is the result of unmet technology needs. Other times, it's just the product of misunderstanding or miscommunication.

Often, says Lisa Davis, CIO of the U.S. Marshals Service, "the customer is not aware of what [the business] owns or does not own or how to apply it to their business." To deal with that, she's set up an in-house app store on the agency intranet. If users are looking for a geographic information systems analytics tool, there's one available via the CIO Store, which also provides links to training resources. "We have brought considerable change in additional tools and capabilities to the enterprise," says Davis. "Our focus is now on adoption strategies, on how we get those tools or apps integrated into day-to-day operations."

Jay Burgess, CIO at Muscogee Nation Casinos, observes that sometimes the new capability a customer is seeking is right in front of them. Consider employees' voice-over-IP phones, for example. The average user sees a handset on the desk and thinks it's just an expensive telephone, says Burgess. So his IT-business liaisons are educating users and rebranding the phones as productivity tools with integrated voice, video and data functions. Users are amazed, he says. "They can now see and find their coworkers, get voice mails from their email, integrate their calendars—all at a faster pace."

Ideally, says National Geographic Society CTO Stavros Hilaris, business users "articulate their needs in the near term so that we may develop proper solutions for their immediate needs as well as their long-term needs." But in the real world, that doesn't always happen. Burgess's biggest problem with rogue users is that they don't give IT a chance to meet their needs.

It's not just that users feel empowered by consumer devices and software they can buy with a credit card. "Business is struggling for survival. They're not following a strategic plan the way it is typically created. They're not looking five years out," he says. "But often times, they don't communicate [their needs], so IT is unable to respond quickly or nimbly."

And that may be because users don't know what they want, says Davis. "They know they need technology, but they do not know where to start." CIOs who want to head off rogue IT should get their staff—such as the account managers Davis has assigned to each agency division—out among those users to help them figure that out.

—S.O.

cess at the U.S. Marshals Service. "It removes the mystery of why it seems to take so long for IT to get anything done," she says. "It illustrates the entire process." The guide covers every step, from the "Aha" moment when users think of a technology need through articulating requirements, evaluating products and choosing vendors. She's also setting up what she calls a CIO Store on the intranet to list software the agency already owns. (For more on improving communication with end users, see "Taming the Rogue Element," this page). When someone is shopping for a specific tool, he can look in-house first. He might still go buy something different, but Davis's hope is that users shop smarter.

But it's not enough for IT to reveal its secret rule book; CIOs should also rewrite some of the rules.

Dulaney says CIOs will move toward providing users with a menu of IT options. He calls it "managed diversity": different

user choices result in different responsibilities for IT. If users want a technology IT has approved, they get full IT support. If they want technology IT hasn't blessed yet, the IT group may help out, but it won't take full responsibility for installing or supporting it. Somewhere in the middle, if a business leader wants to choose her own device, IT makes sure data is delivered to it, but the user has to get her own hardware support. Few IT shops are there yet, says Dulaney, "but this is where we have to go."

In a perfect world, says Susan Cramm, founder of IT leadership consultancy Valuedance, IT would define technology investment policies rather than policing every IT business case from creation to approval. CIOs would provide a list of approved vendors instead of getting involved in all technology provisioning.

IT needs to offer master classes in IT decision making. "Business managers can be naïve."

—Andy Mulholland, Global CTO, Capgemini

Technologists would control access to data and applications rather than devices. "IT is at a crossroads. It needs to either figure out how to bring shadow IT out of the dark and into the light or risk being marginalized as increasingly tech-friendly business leaders take innovation into their own hands," says Cramm, a former CIO and CFO. "It's time for IT to control what matters."

To get there, the IT organization needs to offer master classes in IT decision making. "Business managers—god love 'em, and I do love 'em—can be naïve," says Capgemini's Mulholland. "Some of these guys might be individually bright, but don't understand risk." Capgemini's internal IT organization now develops guidelines for business users in how to mitigate risk when choosing and using IT by, for example, spelling out which services or providers are trustworthy and under what conditions.

There's no shortage of ghost stories in IT circles about such horrors as frustrated marketers setting up their own IT organi-

zations. So Jay Burgess, CIO of Muscogee Nation Casinos, takes preventive measures. He offers business units, such as marketing, a manager-level IT liaison who can commit IT resources to their projects. "The business brings him in as one of their own. He becomes the IT marketing guy, and it gives the marketing group the feeling that they have their own IT. His or her job is to become not just a liaison, but a translator of their business needs into IT strategy."

The goal is to direct, not to dictate. "We set forth a group of standards, but the business unit is free to make adjustments within them," says Burgess. At some point, however, too much free reign makes IT unmanageable. Business processes may fail and people may get hurt. "Our business funds the tribal government," says Burgess. "If we allow the business to fall

on its face and we're not there to pick them up, healthcare clinics shut down, people don't get their food stamps."

It's a constant balancing act. "Standards are guidelines, not a brick wall," says Burgess. "They allow us to operate with some kind of discipline, but if the business is really trying to grow and really has a need, we need to adjust to meet that." He wants to talk about it first, though. For example, it's the casino's policy that operational systems should be integrated with company's core strategic systems, such as ERP. However, the purchasing module offered by its ERP vendor wasn't ideal for the casino's food and beverage managers and purchasers, who wanted to break items down by ingredient to track food costs. IT bent the rule, allowing them to purchase a more effective tool and integrate that with the ERP system. It was a difficult project, but "this flexibility achieved the business goal while preserving the spirit of our policy for integration," says Burgess.

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At the USCIS, Schwartz is working on several fronts to create a kinder, gentler IT image by making development processes more agile, streamlining controls, acquiring virtual server capacity and using lightweight development tools. "I don't want a power struggle," he says. The flexible infrastructure, which includes reusable services, also lets people use IT more freely. "We can help them craft their own solutions without time-consuming development work and without compromising the security and integrity of our IT systems environment."

Technology Risk for Dummies

Some industry watchers say today's user-driven IT environment suggests users should share more technology risks, but Schwartz doesn't see it that way. "One of IT's contributions to the business should be its assessment of and position on risk management."

But a shared understanding of the risks to which technology exposes the enterprise is a must. "There still remains, in many organizations, a lack of understanding by the end user of what IT does," says Gartner's Dulaney. "It's an educational process, but just teaching end users about what IT does doesn't go far."

The business gets a better handle on risk management, Dulaney says, when IT involves it in evaluating risk profiles and value propositions. "It all comes down to explaining the consequences of each decision and having them choose, [because] telling them what to do just leads them to do the opposite."

At the National Geographic Society, joint risk-management decisions are now the rule. "By engaging the business

Sometimes the best way for business users to understand the risk of making a bad technology choice is to let them do it, suggests Burgess with the Muscogee Nation Casinos. Last year, the casinos' HR department wanted a new e-learning platform that wasn't on its list of approved IT projects. After Burgess explained that IT staff were busy with HR's other projects, the department decided to deploy the e-learning platform by itself. The technology seemed straightforward, and the vendor promised a two-month turnaround.

Two months turned into six, and HR, feeling pressure from the board, called IT for help.

It turned out that the vendor had no viable plan for registering employees for the new tool. IT wrote the queries to retrieve the necessary employee login data, but the vendor had changed the import process and failed to inform anyone. So although the system appeared to work, the passwords didn't. Angry users overwhelmed HR with complaints, and the overwhelmed HR managers learned how complex IT project management really is. "They now understand some of the things we do," Burgess says. "No real damage was incurred, only a few bruised egos."

Never Say No

Being a better business partner, offering a more flexible menu of IT options, and educating users about risk must happen. But will it eliminate rogue IT? Probably not.

Forrester's Brown predicts that business users will continue to make potentially bad IT decisions in the near term. When rogue systems proliferate too wildly, "there will be some retrenchment," he says, but the pendulum won't swing as far back to IT control as it has in the past. Still, despite all the joint risk-assessment and the requirements gathering and the CIO's striving to get to yes, not every user will be convinced to cooperate.

Davis found that out last year after working for months with an agency executive to figure out the right collaboration software to deploy. They worked through requirements, integration issues, cost and ROI, then chose a system that could be used by the entire agency. "Then at the last minute, he changed his mind," Davis says. She reminded him that the product they had selected met 90 percent of his requirements. "There's the whole broader spectrum of issues we consider about a product, versus a customer saying, 'This is the product I want because I like it.'"

Additional discussions ensued. Eventually, the executive realized the initial software choice was the best option. But it was a costly lesson.

"It held us back from providing capabilities desperately needed for every customer in the agency," says Davis. Even in the face of poor decisions, however, Davis and her forward-thinking peers have a bias for yes.

"Before when we said, 'This is our standard,' the reply from users was, 'I don't care,'" says Dulaney. "Keep working to make sure the user understands the risk and the trade-offs they are willing to make. The modern CIO should never say 'no.'" **CIO**

Stephanie Overby is a freelance writer based in Massachusetts.

Sometimes the best way for users to understand the risk of making a bad technology choice is to let them do it.

owners and partners in the decision-making process, they understand the risk and share in the decisions regarding the amount of expenditures we will incur to mitigate risk," says CTO Hilaris.

Security and risk management are business decisions, says Schwartz. "I don't want to talk to the business users abstractly about security best practices, or about man-in-the-middle attacks. I want to tell them instead about the potential consequences of a security breach on the agency and the people whose lives we affect." For instance, what if a hostile organization could hack into USCIS systems and grant citizenship to a terrorist? Or a repressive government could find out which of its citizens wanted to emigrate to the United States? Those questions get people's attention. "Risk management and security are business decisions," says Schwartz, "and need to be framed that way."

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Get in the Driver's Seat

Cumberland-Gulf's first CIO accelerates an IT transformation **BY KATHLEEN CARR**

David Banks was working as a consultant on a risk-management project for Gulf when the company merged Cumberland Farms and Gulf Oil. It was at that moment he knew what the company needed most from him. "I put my hand up and said, 'You need a CIO.'"

"I had to open their eyes to the amount of consolidation and backlog work that needed to be done at Cumberland," he says. That backlog included 30-year-old core applications running on a mainframe, and aging equipment at 600 stores that was, as Banks puts it, "past its useful life." The company had been through an extended period of under-investment in IT—it was time for fresh equipment and a fresh perspective.

To take the company forward, the first thing Banks did as a new CIO was get a team together.

"When I walked in, nobody really knew what the technology spend was, and there was a ▶▶▶



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lack of accountability. Legacy systems had to be replaced, there were clear inefficiencies, and I was given the incentive to tighten up the ship."

Part of that tightening meant taking a close look at staffing—who was doing what and who should be where. He got three key senior managers into critical roles—retail automation, wholesale fuel applications and shared services.

"There was a lot of reshuffling at the top. Not everybody fit into the new structure, or even wanted to," says Banks.

Getting these executives in place maintained the company's institutional memory and intellectual property by keeping the knowledge holders within the company.

Wherever he could, Banks also migrated folks who had previously worked developing legacy systems into application-manager roles, where they oversee vendors and newly implemented software. In some cases, Banks says, this was a tough transformation. These people had to quickly get up to speed on the new applications and technology, but because they knew the business well, their "base of business knowledge made it all work."

With his team in place, Banks needed to retain his own seat at the table. "I had to get inserted into the board. I found a reason to be at the table every quarter."

To ensure that he got the board's trust early, Banks provided clear business-oriented objectives and then delivered. When mistakes happened, he was honest about them. But for the most part, his team accomplished its goals, and those early wins won the executives' respect. "We had to change the mentality about potential returns on IT investment, and show that IT was not just a cost center," says Banks.

He relied on his team of senior players and his own business know-how to get board approval for changes he made. "I've always had business and operational responsibilities, so it's easy for me to present what's going on in the technical world in business terms. I drove a business case for every investment we were making. I kept inserting the CIO role as a business driver," says Banks.

"For the first year or two we spent more money, but that was the key to changing people's minds," Banks says. He did successfully change old assumptions.

Despite making so much progress, challenges remain, including sticking to governance policies. "There's always pressure to move a little quicker; we are a heavily audited group. But when the board gets good reports from internal auditing, we have an easier time asking for funding," says Banks.

"I kept inserting the CIO role as a business driver."

—David Banks, CIO, Cumberland-Gulf

Kathleen Carr is a freelance writer based in Massachusetts.

three-minute coach



Help!

How should I prepare myself to present to the boardroom?

RICK GILBERT, FOUNDER AND CHAIRMAN OF POWERSPEAKING

⌚ Always: Make your first line your bottom line by telling the executives, in a nutshell, what you are proposing, why you're proposing it, and exactly what you want from them: Funding? Support for an organizational change? Product approval? Executives are short on time. They want you to get right to the point.

Live by the 10/30 rule: If you are scheduled for 30 minutes, prepare just 10 minutes of material. Expect to spend 20 minutes on questions and comments. In other words, be prepared for a discussion, not a slide-driven lecture. That means slashing the number of slides to two or three (or even zero). That said, you still want detailed backup slides on hand in case a data dive is necessary.

⌚ Sometimes you need to get your head in the right place before starting your meeting. You don't want to go into the boardroom looking for a pat on the back. Don't feel the need to impress. Senior executives do not want to hear about all the hard work you and your team did to get the data. They want to be told what the data means relative to your proposal and their decision-making process and, most important, to the success of the company.

⌚ Never get defensive or argumentative. Being passionate about a project or idea is good, but your demeanor should always be calm and open to input.

Also, never let the meeting spiral out of control. If the board strays too far from the point or, worse, starts arguing with each other, calmly bring the discussion back on track. And never forget to check and recheck your numbers before your presentation. CEOs can often do math on the fly. If your numbers are wrong, you're dead in the water.

Rick Gilbert founded PowerSpeaking in 1985 after holding management positions with Hewlett-Packard and Amdahl. In addition to training, he does executive coaching and keynote speaking.



Katherine C. Garcia

SENIOR VICE PRESIDENT,
APPLICATIONS SERVICES
HEWLETT PACKARD
ENTERPRISE SERVICES

Katherine Garcia is senior vice president of Applications Services for HP Enterprise Services, leading an organization that helps companies in all industries in more than 170 countries take an innovative approach to modernizing and managing their applications portfolios. A recognized leader in IT services, Garcia was previously a senior executive at IBM, Loral and Lockheed Martin.

FOR MORE INFORMATION: download the free whitepaper "The Case for Applications Transformation: Harnessing Applications for Innovation and Agility" at www.cio.com/whitepapers/hpinnovation



Support Innovation with Application Transformation

Creating a roadmap for increased agility and flexibility

Which business issues do applications affect? Why?

The coming decade could see 25 million applications, 4 billion people online, 31 billion connected devices, 1.3 trillion sensors, delivering 50 trillion gigabytes of data. This type of connectivity calls for new industries that deliver real-time, immediate services. Given those numbers, it's safe to say all products and services are enabled by applications, and applications impact all business issues.

HP has some new research on the primary challenges facing IT and their organizations. How do these challenges impact the way IT leaders run and manage applications?

CIOs around the world have told me that although the business is pressuring them to focus on innovation to increase flexibility and agility, they're spending 70 percent to 80 percent of their budget just to keep legacy applications running. IT leaders need to flip that ratio so that they can spend the bulk of their budget on innovation.

In the Americas, 76 percent of IT executives say innovation—adding new value through applications—is far more important than it was two years ago. They say they need to innovate everywhere: integration (72 percent), improving information flow (62 percent), mobility (58 percent), internal use of external information (58 percent), business intelligence (58 percent) and analytics (49 percent). They need to consider not just freeing up resources, but also ensuring that applications and operations are flexible enough to support change in the future.

How do you define applications transformation, and how can CIOs transform their application portfolio to better meet the organization's objectives?

Transformation is a comprehensive approach to applications, covering the portfolio, development, management and governance. CIOs need to create a roadmap of projects to eliminate the legacy applications that hinder growth, profitability and speed. The first step is to assess the entire applications portfolio—not just what you have, but the processes involved,

the available people and skills, the existing governance process and each application's share of the IT budget. You must understand how each application is important to the business and to the ongoing strategy so that you can set spending priorities and free resources by rationalizing less critical applications.

Technologies like cloud computing, service-oriented delivery, mobility and virtualization add up to a diverse and complex applications landscape. How does a CIO get started?

Determine what new value will have the biggest impact on your goals and business strategy. Then choose the technologies that are most appropriate given your risks and cost objectives. If you want to decrease capital costs, consider delivery as a service. If you want to cut maintenance expenses, look into outsourcing. If you need to accelerate time to market, make use of an applications services partner. Successful IT organizations leverage the external expertise and skills of a partner like HP to help them be more successful.

What are the most important criteria for a service provider or partner that a CIO should consider?

Experience has to be top of the list: you don't want to pay for a vendor's on-the-job training. Look for a partner that's done this type of work for other companies of your size, in your industry and in your region. Make sure they have a broad range of capabilities, tools and best practices that reflect what you need, rather than just what they're equipped to provide. Seek out a service provider with experience and technology that fit into your corporate culture.

How will IT leaders know they've been successful?

The IT budget is increasingly being spent on new value, new projects and innovation, while still maintaining quality of service. The IT organization is more flexible and agile. Most of all, the successful IT leader is integrated into the key leadership team and actively asked for input into how IT can help drive business value.



The Mini-Me CIO

CIOs who want a strategic role need to delegate. Start by training an up-and-coming leader to be your second-in-command. **BY CHRISTINE CELLI**

Don't we all sometimes wish we could be cloned? As a mom of two small boys with a full-time job editing this magazine, I dream daily of being duplicated.

Juggling two or more jobs is nothing new for CIOs. Jon Harris spent decades in IT leadership positions, and is deeply aware of the struggles IT leaders face: finding time to be strategic, thereby proving to the board that IT can produce business benefits, while still dealing with operational matters.

For Harris, the solution is having a second-in-command. He recently retired from such a role, as CTO for the University of Texas at Arlington, and worked for many years as the deputy to city of Austin CIO Brownlee Bowmer. In Harris's case, those high-level operations roles were in place before he arrived, freeing the CIO to deal with business issues.

For companies without such a position already on the payroll, he concedes "it's a hard sell. The CEO doesn't [always] get the benefit of a number two to free up the CIO to do other things." Nonetheless, he says, "it's critical if the CIO is going to move into the transformational role. You can't serve two masters—one being the business, one being IT."

If you don't have a deputy, it's time to start developing the role and grooming someone on your staff to take on your operational responsibilities, whether or not you can convince your CEO and board of directors to create a new position immediately.

Get Out of the Way

The right deputy, says Harris, is someone you're comfortable working closely with who also has the respect of others in IT—both above and below them. Look for someone, for example, among your IT directors. A manager with some visibility outside of IT is also an asset, although he or she doesn't need specific business-side experience. Once you've identified that person, says Harris, "The first strategy is to

tell them exactly what you're doing: 'I'm trying to groom you to take my job.'"

Then, place your ego in check. Part of letting go of control is realizing you can't—and don't have to—do everything. You'll know you're successful when you can trust that operations are running smoothly while you focus on strategy.

Plenty of up-and-coming IT leaders want the opportunity for on-the-job training that would position them to become second-in-command or a CIO. But Harris, who mentors future CIOs through the CIO Executive Council

(a peer advisory service founded by *CIO's* publisher), sees few emerging leaders who have access to it. Surveys we've conducted in the last year suggest lack of time (39 percent) and opportunity (17 percent) are the greatest obstacles. Yet 53 percent of CIOs surveyed by the Council list developing leadership depth as a top priority. Harris thinks the disconnect stems from CIOs unable to let go a little. "I'm a victim of it myself. It's a control thing," he says.

"Many CIOs just feel more comfortable on the technical side of things."

Meanwhile, build the case for an official number two. You may not be able to promise your alter ego more money or a promotion right away, and she'll have to do more work than is included in her job description. But you can promise her greater visibility, which will help to advance her career and your argument for having a designated deputy.

"Most companies will look at the bottom-line salary [of a deputy CIO role] and say no. But what happens if the CIO is hit by train?" asks Harris. "I always had a de facto number two in training."

The real bottom line is the cost to a company when the CIO doesn't have time to think about its future. Creating a role for a deputy who can run IT helps both your company and your career.

Christine Celli is Assistant Managing Editor of *CIO*. She can be reached at ccelli@cio.com.

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Social Screenwriters

Over the summer, movie buffs and fans of social media helped director D.J. Caruso create an online film called *Inside*. A horror movie that began shooting on July 25, *Inside* features Emmy Rossum (of *Phantom of the Opera* fame) as a woman who is locked in a room with only her laptop and a spotty Internet connection. Fans on Facebook, Twitter and YouTube helped develop the plot and assist Rossum's character in her escape by sending suggestions or voting on ways for her to get out. On her Facebook page, the character posed questions for fans to answer and shared pictures, status updates and YouTube videos. The film is broken into episodes, in which characters such as her family members, friends and a police detective communicate with her through social media and Skype to find and save her. Episodes were released on YouTube and the film's website as they were completed, and the finished movie was posted on Aug. 14. Caruso chose one social-media-savvy fan to make a cameo in the final version.

—Lauren Brousell

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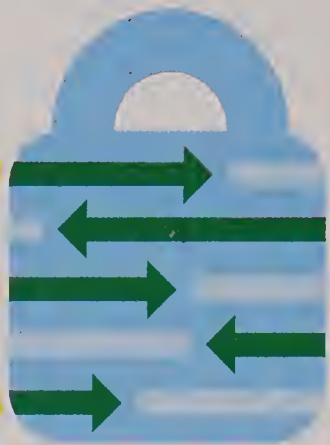
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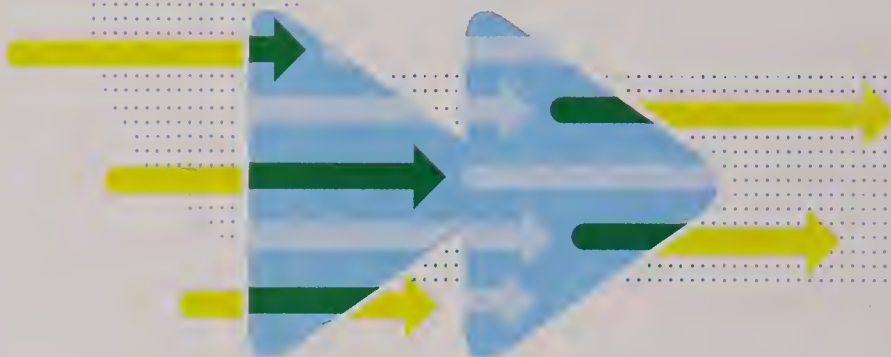


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